

I claim:

1. A method for monitoring a condition of a battery which is connectable to an
5 electrical load, comprising the steps of:
 - measuring a voltage characteristic of said battery during a measuring event
subsequent to a connection event when a connection relationship between said
battery and said electrical load is changed;
 - comparing said voltage characteristic to a preselected threshold value; and
 - 10 evaluating said condition of said battery as a function of the relative
magnitudes of said voltage characteristic and said threshold value.
2. The method of claim 1, wherein:
 - said voltage characteristic is a minimum voltage magnitude which is
 - 15 subsequent to said connection event.
3. The method of claim 1, wherein:
 - said voltage characteristic is a voltage magnitude measured at a
predetermined time which is subsequent to said connection event.
 - 20
4. The method of claim 1, wherein:
 - said voltage characteristic is a voltage magnitude measured subsequent to a
minimum voltage magnitude which is subsequent to said connection event.
- 25 5. The method of claim 1, wherein:
 - said electrical load is a starter motor.

6. The method of claim 5, wherein:

said starter motor is connected in torque transferring relation with an internal combustion engine.

5 7. The method of claim 1, further comprising:

initiating said connection event.

8. The method of claim 1, further comprising:

determining the occurrence of said connection event.

10

9. The method of claim 8, wherein:

said determining step comprises the step of measuring a plurality of occurrences of said voltage characteristic.

15 10. The method of claim 8, wherein:

said determining step comprises the step of reacting to a rotation of a rotatable shaft.

11. The method of claim 10, wherein:

20 said rotatable shaft is a crankshaft of an internal combustion engine.

12. The method of claim 1, wherein:

said battery is connected in electrical communication with a starter motor of a marine propulsion system.

25

13. The method of claim 1, wherein:

said voltage characteristic of said battery is measured across two electrodes of said battery.

14. The method of claim 1, wherein:

5 said voltage characteristic of said battery is measured across two electrical connections of said electrical load.

15. The method of claim 1, wherein:

10 said connection relationship is changed during said connection event from said electrical load being disconnected from said battery to said electrical load being connected to said battery.

16. The method of claim 1, further comprising:

15 storing said voltage characteristic for a plurality of subsequent magnitudes of said voltage characteristic obtained during subsequent measuring events.

17. The method of claim 16, further comprising:

20 using said plurality of subsequent magnitudes of said voltage characteristic to calculate a trend of magnitudes of said voltage characteristic.

18. The method of claim 17, further comprising:

 predicting a future condition of said battery as a function of said trend.

19. The method of claim 1, further comprising:

25 selecting said preselected threshold value from a plurality of threshold values.

20. The method of claim 1, wherein:

each of said plurality of threshold values represents a distinct level of said condition of said battery.

5 21. A method for monitoring a condition of a battery which is connectable to an electrical load, comprising the steps of:

measuring a voltage characteristic of said battery during a measuring event subsequent to a connection event when a connection relationship between said battery and said electrical load is changed, said voltage characteristic being a
10 minimum voltage magnitude which is subsequent to said connection event, said electrical load being a starter motor;

comparing said voltage characteristic to a preselected threshold value; and
evaluating said condition of said battery as a function of the relative magnitudes of said voltage characteristic and said threshold value.

15

22. The method of claim 21, wherein:

said starter motor is connected in torque transferring relation with an internal combustion engine.

20 23. The method of claim 21, further comprising:

initiating said connection event.

24. The method of claim 21, further comprising:

determining the occurrence of said connection event.

25

25. The method of claim 24, wherein:

said determining step comprises the step of measuring a plurality of occurrences of said voltage characteristic.

26. The method of claim 21, further comprising:

5 selecting said preselected threshold value from a plurality of threshold values.

27. The method of claim 21, wherein:

10 each of said plurality of threshold values represents a distinct level of said condition of said battery.

28. A method for monitoring a condition of a battery which is connectable to an electrical load, comprising the steps of:

15 measuring a voltage characteristic of said battery during a measuring event subsequent to a connection event when a connection relationship between said battery and said electrical load is changed, said voltage characteristic being a minimum voltage magnitude which is subsequent to said connection event, said electrical load being a starter motor, said starter motor being connected in torque transferring relation with an internal combustion engine, said connection
20 relationship being changed during said connection event from said electrical load being disconnected from said battery to said electrical load being connected to said battery;

 comparing said voltage characteristic to a preselected threshold value; and
 evaluating said condition of said battery as a function of the relative
25 magnitudes of said voltage characteristic and said threshold value.

29. The method of claim 28, wherein:

said voltage characteristic of said battery is measured across two electrical connections of said electrical load.

30. The method of claim 28, further comprising:

5 selecting said preselected threshold value from a plurality of threshold values.

31. The method of claim 30, wherein:

10 each of said plurality of threshold values represents a distinct level of said condition of said battery.